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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,597	11/25/2003	Martin Blessing	60,680-539	6026

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EXAMINER

BELLINGER, JASON R

ART UNIT	PAPER NUMBER
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3617

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/721,597

Applicant(s)

BLESSING ET AL.

Examiner

Jason R. Bellinger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 11 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/2/04
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Election/Restrictions

1. Applicant's election without traverse of species I, drawn to Figures 1-8 and claims 1-10, in the reply filed on 2 May 2005 is acknowledged.
2. Claims 11-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 2 May 2005.

Drawings

3. The drawings are objected to because Figures 2, 5, and 8 lack any reference characters denoting the features of these drawing figures. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If

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the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "comprising", "means", and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Claims 4-5 and 7-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "a wall thickness" in line 1 of claim 4 is a double recitation. The center portion has previously been described as having "a wall thickness" in line 5 of claim 1. It is therefore unclear whether the "wall thickness" of

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claim 4 is the same "wall thickness" as that set forth in claim 1, or an additional element of the invention.

The phrase "a wall thickness" in line 1 of claim 5 is a triple recitation. The center portion has previously been described as having "a wall thickness" in line 5 of claim 1. It is therefore unclear whether the "wall thickness" of claim 5 is the same "wall thickness" as that set forth in claim 1, or an additional element of the invention.

The phrase "a wall thickness" in line 1 of claim 7 is a quadruple recitation. The center portion has previously been described as having "a wall thickness" in line 5 of claim 1. It is therefore unclear whether the "wall thickness" of claim 7 is the same "wall thickness" as that set forth in claim 1, or an additional element of the invention.

The phrase "a wall thickness" in line 1 of claim 8 is a quintuple recitation. The center portion has previously been described as having "a wall thickness" in line 5 of claim 1. It is therefore unclear whether the "wall thickness" of claim 8 is the same "wall thickness" as that set forth in claim 1, or an additional element of the invention.

7. Claim 5 recites the limitation "said center point" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. This limitation has not been previously set forth in the claims. It is believed that the term "point" should be replaced with the term --portion-- to conform with the structure of similar claims, however it is unclear whether or not this belief is correct.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simon in view of Alexoff ('375 B1). Simon shows an axle assembly 10 having a tube disposed about a longitudinal axis. The tube includes first and second end portions 20 and a center portion 11. The first and second end portions 20 have a uniform wall thickness (generally indicated by 23, shown in Figures 3-6).

As shown in Figures 3-4 and discussed in column 3, lines 62-66, the center portion 11 has a uniform wall thickness (generally designated by 17) at first and second axially spaced segments 18; and a non-uniform thickness (generally designated by 16) between the axially spaced segments 18. This non-uniform thickness 16 of the tube center portion has a generally elliptical cross-sectional interior contour.

The wall thickness 17 of the axially spaced segments 18 is greater than the minor wall thickness, and at least equal to (but generally greater than) the major wall thickness, of the center portion 11 between the axially spaced segments 18 (as shown in Figures 3-4, and 6). The axially spaced segments 18 would provide suspension system attachment points.

Simon does not disclose that wall thickness (generally designated by 22) of the intermediate center portion 21 of the tube between the first and second axially spaced segments 18 and the tube end portions 20 is non-uniform. As shown at the left end of Figure 3D, Alexoff teaches the use of an axle assembly having a tube 88 with an end portion with a uniform wall thickness. A center portion of the tube 88 has an axially spaced segment 86 with a uniform wall thickness, and a non-uniform wall thickness 84 between both the axially spaced segment 86 and between the axially spaced segment 86 and the end portion of the tube 88.

Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the intermediate center portion 21 of Simon with a non-uniform wall thickness 22 for the purpose of providing a lightweight, yet durable axle assembly.

Simon does not show the first and second end portions and the center portion of the axle tube having a common outer diameter. Figure 3D of Alexoff teaches the use of an axle tube 88 wherein the ends of the axle share a common outer diameter with the center portion. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the axle tube of Simon with a common outer diameter from the end portions to the center portion, dependent upon the type of vehicle to which the axle would be mounted and what other elements of a vehicle suspension system are to be mounted on the axle.

Given the fact that Figure 5 of Simon shows the wall thickness 17 of the axially spaced segments 18 being a non-uniform elliptical shape, it would have been obvious to

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one of ordinary skill in the art to form the wall thickness 22 of the intermediate center portion 21 located between the axially spaced segments 18 and the tube end portions 20 as a non-uniform elliptical shape in order to reduce the weight of the axle assembly.

In the event that the wall thickness 22 of the intermediate center portion 21 located between the axially spaced segments 18 and the tube end portions 20 is formed as a non-uniform elliptical shape (as taught and shown by 17 in Figure 5), and the wall thickness 17 of the axially spaced portions 18 is uniform (as shown in Figures 3-4 and 6), then the wall thickness 17 (as shown in Figures 3-4 and 6) of the axially spaced segments 18 would be greater than the minor wall thickness, and at least equal to the major wall thickness, of the intermediate center portion 21 between the axially spaced segments 18 and the tube end portions 20.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references are considered to show axle tubes having different portions with varying wall thicknesses. For example, Mogford et al shows an axle tube of the type described above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R. Bellinger whose telephone number is 703-308-6298. The examiner can normally be reached on Mon - Thurs (9:00-4:30).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Morano can be reached on 703-308-0230. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason R Bellinger
Examiner
Art Unit 3617

JASON R. BELLINGER
PATENT EXAMINER

jrb *JRB*
6/12/05